

Listing of claims

1. (currently amended) A transport system for an automatic sample testing machine comprising, in combination:

a) a carrier holding test sample devices and having a plurality of optical position tracking ~~feature~~ features formed in said carrier; and

5 b) a drive subsystem for moving said carrier through said automatic sample testing machine, said drive subsystem comprising a reciprocating motor-driven block engaging said carrier and moving said carrier back and forth in a predetermined longitudinal path, said path having a first end and a second end, said path extending along a longitudinal axis from an entrance station to a plurality of processing stations in said
10 automatic sample testing machine, wherein said test sample devices access said plurality of processing stations as said carrier is moved along said path; and

c) at least one carrier position tracking sensor placed along said path detecting the position tracking feature ~~features~~ on said carrier as said carrier is moved along said path.

2. (currently amended) The system of claim 1, wherein said carrier further comprises features for holding the test sample devices, and wherein the features are arranged in the carrier such that the test sample devices are in alignment with the position tracking features of the carrier. ~~and at least one sensor are constructed and arranged such that said at least one sensor detects the position of test sample devices carried in said carrier along said path when the sensor detects the position of the position tracking feature formed in the carrier.~~

3. (original) The system of claim 1, wherein said block comprises a first surface engaging said carrier for moving said carrier in a first direction along said path and wherein said block receives a lift pins means for engaging said carrier for moving said carrier in a second opposite direction along said path.

4. (currently amended) The system of claim 1, wherein said drive subsystem further comprises:

a threaded shaft having a first end and a second end, said shaft extending between said first and second ends of said path,

a servomotor driving said shaft and located at said first end,

a fixed front bearing mount receiving said second end of said shaft,

a guide extending parallel to said threaded shaft along said path between said first and second ends and extending through said block, and

a threaded member fixed with respect to said block receiving said threaded shaft between the first and second ends thereof,

wherein as said shaft ~~rotates~~ is rotated by the servomotor within said threaded member, said block is slid along said guide to thereby move said block between said first and second ends of said path.

5. (previously presented) The system of claim 1, further comprising a pair of replaceable wear strips positioned along the longitudinal path providing a bearing surface for said carrier as said carrier is moved along said path between said first and second ends.

6-19. (cancelled)

20. (currently amended) The system of claim 1, wherein the carrier comprises a plurality of features for holding a plurality of the test sample devices in a spaced position along the length of the carrier and wherein the position tracking ~~feature~~ features formed in said carrier comprises a plurality of slots formed in said carrier in alignment with the plurality of features for holding the test sample devices, wherein the slots are detected by the carrier position tracking sensor.

21. cancelled.